

Translation

PATENT COOPERATION TREATY

PCT/EP2003/014621



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WA 2984-02WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/014621	International filing date (<i>day/month/year</i>) 19 December 2003 (19.12.2003)	Priority date (<i>day/month/year</i>) 02 January 2003 (02.01.2003)
International Patent Classification (IPC) or national classification and IPC F03D 1/06		
Applicant WOBBEN, Aloys		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>1</u> sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 10 July 2004 (10.07.2004)	Date of completion of this report 01 April 2005 (01.04.2005)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

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I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages 1-11, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages 2-29, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages 1, filed with the letter of 16 March 2005 (16.03.2005)
- ☒ the drawings:
pages 1/5-5/5, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 2-16, 29

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 2-16, 29
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1, 18-28	YES
	Claims		NO
Inventive step (IS)	Claims	1, 18-28	YES
	Claims		NO
Industrial applicability (IA)	Claims	1, 18-28	YES
	Claims		NO

2. Citations and explanations

The invention relates to a rotor blade tip according to the preamble of claim 1.

Such rotor blade tips are known, for example, from US-A-4 324 530.

The problem addressed by the present invention consists in developing a generic rotor blade tip such that it has a tip edge optimized to minimize marginal vortex.

This problem is solved by the features of the invention according to claim 1, namely that the leading edge and the trailing edge of the blade tip describe a preset, preferably elliptical, curve in a virtually laterally reversed manner in the direction of the upper surface of the blade tip while at the same time the upper surface of the blade tip is curved away from the rotor blade suction side (that is, curved towards the pressure side away from the plane of the rotor blade).

Thus, the blade length from which the airflow is detached is increased, leading to reduced noise emission.

These features are not shown by the available prior art.

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The subject matter of claim 1 is therefore novel and involves an inventive step.

Dependent claims 18-26 (see observations) represent further embodiments of the rotor blade tip according to claim 1.

Claims 27 and 28 each claim a rotor blade with a rotor blade tip according to claim 1 (see observations).

Observations

Claims 2-15 and 16 relate to a rotor blade according to the original claim 1. These claims are therefore unclear.

The back reference in each of claims 18-28 has not been brought into line with the new claim 1.

Claim 29 is worded unclearly and it is consequently not clear which features are contained by this claim.